UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,829	03/22/2002	Michel Perrut	366325-525	5274

25561 7590 05/22/2003

ALLEN BLOOM
C/O DECHERT
PRINCETON PIKE CORPORATION CENTER
P.O. BOX 5218
PRINCETON, NJ 08543-5218

EXAMINER
DRODGE, JOSEPH W

ART UNIT	PAPER NUMBER
1723	

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
10/088,829	PERRUT ET AL
Examiner	**Art Unit**
JOSEPH DRODGE	1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-11 is/are pending in the application.

4a) Of the above, claim(s) 1-11 is/are withdrawn from consideration.

5) ☒ Claim(s) ~~6, 7, and 11~~ is/are allowed.

6) ☐ Claim(s) 1-5 and 8-10 is/are rejected.

7) ☒ Claim(s) ~~1-5 and 8-10~~ 6, 7 and 11 is/are objected to.

8) ☒ Claims ~~6, 7, and 11~~ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2
4) ☐ Interview Summary (PTO-413) Paper No(s).
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 6, 7 and 11 are objected to under 37 CFR 1.75© as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 U.S.C. § 112

3. Claims 1-5 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Within independent claim 1, structural relationship, if any, between "bed of adsorbent product" and later recited "porous support adapted to adsorb the extract" is unclear.

Similarly, functional relationship within claim 8 between "means for conducting enthalpy" and "means for eliminating the water" and the prior recited "impregnation enclosure" are also

unclear; it is unclear how the respective "means..." can be downstream, yet create or effect a phase mixture within the enclosure therein.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCaffrey et al patent 4,460,476 in view of Tan patent 5,160,044.

McCaffrey et al disclose apparatus and method for separating water from organic solvents, [as in claims 1 and 8] comprising passage of mixtures thereof through at least two enclosures in series containing a combination of adsorbent substances and molecular sieves (column 2, lines 1-11 and 64-68 and column 3, lines 1-4); means to effect elevated temperature and pressure (column 2, lines 45-49) and for claim 1, apparatus to effect vaporizing (column 3, lines 5-6).

The claims differ in requiring supercritical fluid being a part of the initial fluid mixture and means to add such fluid thereto, respectively. Tan teaches supercritical fluid addition to an ethanol/water mixture being separated by a molecular sieve process in column 3, lines 10-24. At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have modified the apparatus and method of McCaffrey et al, by such addition of supercritical fluid taught by Tan, to effect better separation effectiveness.

Regarding claims 2 and 3, Tan teaches pure carbon dioxide addition in column 3, lines 16-17.

Regarding claims 4 and 5, Tan also teaches a co-solvent system in column 3, lines 13-21.

Regarding claim 9, McCaffrey et al disclose a heat exchange envelope in column 2, lines 63-65 "forced air jacket around the compound".

Applicant is cautioned that although claims 6 and 7 are not considered in this Office Action , McCaffrey et al also teach the temperatures and pressures disclosed in column 2, lines 48-49 and 53-55 while Tan teaches elevated temperatures and pressure in column 3, lines 16-28.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCaffrey et al in view of Tan as applied to claims 8 and 9 above, and further in view of DeFilippi et al patent 4,349,415 or Moses patent 4,877,530. Claim 10 also requires the system forming a countercurrent fractionating column arrangement. DeFilippi et al in column 6, lines 22-27 and Moses in column 8, lines 54-63 teach such arrangement. At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have modified the McCaffrey et al/Tan arrangement, by designing the components to constitute such countercurrent arrangement, as taught by Tan, to aid in materials and energy conservation.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph W. Drodge whose telephone number is (703) 308-0403. The examiner can normally be reached on Monday-Friday from approximately 8:30 AM - 4:45 PM.

The fax phone number for this Group is (703) 872-9310 or (703) 872-9311 for after fiunal submissions. When filing a FAX in Tech Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and

other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Joseph W. Drodge
Primary Examiner
Art Unit 1723

JWD
May 21, 2003